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THE CARE OF THE SICK ROOM

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HARVARD HEALTH TALKS

HARVARD HEALTH TALKS

THE CARE OF THE SICK ROOM

BY

ELBRIDGE GERRY CUTLER, M.D.

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HARVARD HEALTH TALKS

PRESENTING the substance of some of the public lectures delivered at the Medical School of Harvard University, this series aims to provide in easily accessible form modern and authoritative information on medical subjects of general importance. The following committee, composed of members of the Faculty of Medicine, has editorial supervision of the volumes published:

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THE CARE OF THE SICK ROOM

THE CARE OF THE SICK ROOM

IT is obvious at the outset that circumstances must often govern our decision in the choice of a sick room, whether the habitation be in the city, suburbs, or country districts. Should the home be a small apartment in a crowded urban locality, the problem would be different from that in an apartment of the same size in the suburbs, while it would be still different in an isolated country home.

Where a selection of rooms for the sick is possible, the chief requisites are good light, good air, cleanliness and quiet; of secondary consideration is nearness of a bath-room. Good light is obtained by taking a room with a southerly exposure in the Spring, Autumn, and Winter months; in the Summer an easterly out-

look is better. One with plenty of window space is the best, and so located that it is not overtopped by a building on the opposite side of the way. Such a room would be found on the second story or above, the only limit being the necessity of those who are to care for the patient to climb stairs often, in the discharge of their duties. Where the climbing of stairs would be irksome to the attendant, a lower story might be chosen. In case of contagious disease, the room should be near the top of the house, as thus the best isolation and greatest protection against diffusion of infection are maintained. For non-contagious cases, however, the lower stories are often more convenient. The light should be allowed to enter the room freely, the full blaze of sunlight, tempered only by a Venetian blind, a muslin or lace curtain, or window-shade of light-colored fabric. The more unrestricted the light, the better for the patient, as a rule. If, however, the eyes are

sensitive to light, as during the early stages of measles or in any other disease where the eyes may suffer, a green shade may be worn over the eyes by day; or, perhaps better still, a narrow band of dark-colored thin cloth may cover the eyes, and the ends be tied behind the head. If the light is still too bright, a dark screen may be placed before the window or be suspended from the ceiling without excluding the air, or the patient may lie with his back to the window.

The reason for the benefit of good sunlight is not far to seek. Scientists have determined that disease germs thrive in dark, moist, warm places, and that exposure to sunlight for a certain time, limited to a few hours, will have the effect of killing many of the most virulent of these germs. The sunlight then will help on toward recovery any patient who labors under the affliction of many of the diseases caused by pathogenic microörganisms. Another good reason for plenty

of sunlight is the fact, also established by scientific demonstration, that the vitality, or vital force, of any human organism is markedly increased by exposure to direct sunlight. This exposure to sunlight forms the basis, indeed, of certain methods of treatment of a few diseases of the skin at the present time. Moreover, the life-giving properties of sunlight have been observed since the earliest times, and have been extolled by the ancients in prose and verse in many works which have come down to us. Both domestic and wild animals recognize the benefit of the sun's rays. We are all familiar with the house dog basking in the sun, the cat, the barn-yard fowl, the ox, the sheep — all seeking the light. If left to themselves undisturbed, all seek the sun and seem to love to bask in its rays. We may say, then, that it is a natural instinct of animal life to seek the light. But though we all recognize the benefits of sunlight, we all know that under some

circumstances it may prove harmful when too powerful or too long continued in its action on the skin. Some of us, perhaps, may have a vivid recollection of a sunburn of the face, hands, arms, or back, because of incautiously prolonged exposure to the direct rays of the sun. We may then lay down the axiom that properly tempered sunlight is good for the sick. How, then, shall we temper the light so as to get its beneficial effects and avoid its harmful ones ? One very good way is to have some thin light-colored fabric so suspended as to shield the patient from the direct rays, and yet allow the light to filter through. The ingenuity of the attendant can readily devise some simple means of effecting this purpose.

For lighting the room by night, the very best way is to depend on indirect illumination by street lights out of doors, if any such be near the house. Where such lights are at a considerable distance, we

must depend on a light in the room of the patient. A very good one is a short broad paraffin candle which will burn nine hours and, having a narrow wick, gives but a faint glimmer. Such a night light is purchasable at any apothecary store. Where more illumination is required temporarily, the usual lights of the room or an electric flash-light may be made use of. The above night candle gives out but little heat, and can be placed in the chimney to promote ventilation as well as to give light.

A small kerosene lamp will serve the same purpose, and a screen to modify the amount of light in the room can readily be devised. It is less desirable to use gas light the entire night on account of the heat produced and the unpleasant odor which is incident to the combustion of illuminating gas.

The next requisite, good air, is also best attained by getting above the first story

of a house. By this means we are above the greater part of any dust which may be floating in the air or be carried in air currents: the dust, being heavy, tends to sink, so that the upper levels of air are freer from this contamination. Another reason for going up high in a house is the further removal from any surface emanations from the surrounding soil which may exist — the higher we get, the more is the dilution of any such emanation.

Having obtained the proper location, the next thing is to make sure of an appropriate air-space for the patient. Scientists tell us that one thousand to three thousand cubic feet of air for each individual is best in a room. Translated into ordinary language, this means that we must have a space eight feet long, eight feet high, and six and one-half deep for each person who is to stay in the room. We will get this if we can; if not, we must do what we are able. At least it is

something to know how much we ought to have. Now it is not enough to have the air space alone — we must further see to it that the good air is frequently renewed, at the rate of three thousand cubic feet an hour, — that is, that there is proper and effective ventilation. Ventilation is best obtained through an open chimney in one side of a room, and open doors and windows on the other side, perhaps opposite each other. In mild or summer weather, windows, doors and chimney should be wide open. In rough or extremely cold weather, windows and doors should be but little open, the chimney wide open, and at the same time a little fire on the hearth to encourage an upward current to the air from the room, as well as to give a slight warmth to the air. As above stated, a lighted kerosene lamp in the throat of a chimney, or even a lighted candle, will aid very materially in creating and maintaining this upward current.

This brings me to say a few words on the temperature which experience has proved to be the best to maintain. Sixty degrees Fahrenheit is the ideal temperature for a room to be kept, in which a person lies ill in bed. If the patient has fever, the room may be kept at a few degrees lower than this with good result to the invalid. In pneumonia, typhoid fever, tuberculosis, we keep the windows wide open, though we may have artificial heat in the room as well (register of a hot-air furnace, radiator for steam or hot-water heating, open fire on the hearth of the chimney). Such a temperature, *e. g.*, lower than sixty degrees Fahrenheit, may be trying for the nurse or attendant, but is good for the patient; discomfort can be met by the wearing of thicker clothes or wraps by the nurse. It goes without saying that the patient is supposed to have adequate bed clothing to keep him warm. In a recent lecture, a famous foreign physician said: "One fact is to be

constantly borne in mind, and that is, that any kind of outside air is better than the best kind of inside air for a tuberculosis patient," and he might well have gone further and included pneumonia, typhoid, and several other diseases as well. It is well to bear in mind that a window open three inches at the top and three inches at the bottom will ventilate better than when open six inches at either end alone. Also, when you wish to open the window wide, you get a better result by opening it an equal distance both at top and bottom, halving the window between them. Where the sick room is inhabited by adults, the window may be opened directly; when, however, the patients are children, it is sometimes advisable to temper the entering air current a little. This, after numerous trials, was found to be best accomplished at the Boston Children's Hospital by having movable frames fitted into the windows with cheese-cloth stretched over them,

which should filter the air and free it from dust and at the same time avoid a direct current. This I have found very good, and it can be easily arranged over any window by means of a few tacks properly placed. With this arrangement we can have the window open to a greater or less width the entire time and thus secure a constant supply of fresh air without draft. Of course it will be necessary to change the cheese-cloth frequently.

The following observations of Dr. John B. Todd, on "Ventilation,"[1] though not in exactly the line of caring for the sick, cast an interesting and instructive sidelight on this most important topic. Dr. Todd says: "In a close, stuffy, conventionally ventilated schoolroom, filled with body odors, occupied by pupils, restless, easily fatigued, hacking and coughing, and where it was not uncommon for one to faint, I placed wood

[1] *New York Medical Journal*, April 18, 1914.

frames covered with medium weight, unbleached cotton cloth in the lower sash opening of five windows. Fifty square feet of opening were so screened. The restlessness, hacking and coughing disappeared: instead of becoming easily fatigued, the pupils showed increased energy, did better work, and discipline was easier to maintain. Sumner School, in Syracuse, in which I tried this out, is now fully equipped with fresh-air screens in every class room, hall and coat room. There are seventy-eight windows screened, with a total opening of six hundred and forty-five square feet, through which filtered air is diffused; odors have disappeared, with a greater freedom from dust. Out-of-door conditions of air purity exist in the building, together with a temperature of comfort.

" Subsequent examinations revealed a scientific basis for the improved conditions. The humidity was found to be practically that of the out-of-doors air.

The dust was practically eliminated, except where mud was brought into the room by the children's feet. The odors entirely disappeared and the lighting of the room was not interfered with, the screens giving a diffused light that was comfortable to the eyes.

" The conclusion is inevitable that in this experience the resulting conditions were not only those of comfort, but those that are at the foundation of health."

The testimony of Miss Hinsdale, head of the Kindergarten, is as follows: " Your fresh-air window screens have certainly been most satisfactory in our Kindergarten. Our attendance of little folks during the winter months was unusually good. Reason for this: the children seemed free from colds, thanks to plenty of fresh air. Children were wide awake, less restless, and not tired when session closed. As teachers, we both found our voices stronger and throats less sensitive."

Another most important thing which the open window accomplishes is the maintenance of a proper humidity of the air of the sick room. We are told that a humidity of from forty-six to sixty-five is the best to keep up in a room, and this can be secured most conveniently by allowing unrestricted interchange with the outside air. I have repeatedly observed a calm, refreshing sleep to follow in a previously wakeful and restless patient on throwing a window wide open. How often have we all seen young children fall asleep in their baby carriages directly after reaching the outside air.

It is freshness of air that we seek, not particularly cold air, although the latter up to a certain point, sixty degrees Fahrenheit, is desirable.

In summer we often have to aid ventilation by some artificial means, as by swinging a door back and forth rapidly on its hinges, or, better still, by the aid

of an electric fan. The air may be further cooled by directing its current over water standing in a shallow basin, or perhaps over a lump of ice. I recall that the sick room of President McKinley was kept at comfortable temperature by means of electric fans blowing air over tubs of ice.

The next requisite, cleanliness, is best obtained by dispensing with anything which may gather dust; such things are carpets, curtains, upholstered furniture, clothing. Such articles have no place in the sick room, nor in fact in any sleeping room. If I had my way, a law would be passed banishing from the sleeping chamber everything but the bed which is slept in, a single chair, an upright pole with hooks around it to hold the day clothes, a small table and a small wall mirror. The sleeping chamber is for one purpose only, namely, to sleep in, and needs no decoration: in fact, it is better without it. The walls should be painted and the

ceiling tinted, both with grateful colors a few shades off white. If the floor be painted, when it is of soft wood, or shellacked if of hard wood, anybody can see in an instant whether it is clean or not. The cleaning of a floor of this kind after an accidental soiling by the tipping over of some utensil is a short and easy process, compared with cleaning a carpet. Soft slippers of carpet or felt on the feet should be the largest things allowed on the floor. The presence on a floor of a carpet, or even a large rug, is no small menace, as the observations of Cornet amply prove. Cornet collected the dust from the walls and bedsteads of various localities and determined its virulence or innocuousness by cultivation in test tubes and by inoculation into susceptible animals. Material was collected from twenty-one wards of seven hospitals, three asylums, two prisons, from the surroundings of sixty-two consumptive patients in private practice, and from

twenty-nine other localities in which consumptive patients were only transient frequenters (outpatient department of hospitals, streets, etc.). Of one hundred and eighteen dust samples from hospital wards or the rooms of consumptive patients, forty were infective and produced tuberculosis — this in places which were supposed to be kept clean. Cornet's observations have been abundantly confirmed in various parts of the world. Thus Strauss in the Charité Hospital in Paris put cotton-wool plugs in the nostrils of twenty-nine assistants, nurses, and ward-tenders to collect the dust of the wards. In nine of the twenty-nine cases these plugs contained tubercle bacilli which proved virulent to animals. In view of these and similar facts, it is small wonder that we physicians preach the banishment of all dust-collecting materials from sick rooms.

If for any reason the carpet on a sick room cannot be removed, we may cover

it with a large piece of linoleum, oilcloth, canvas or unbleached sheeting, which can be tacked or pinned to the floor and will help to minimize the objections.

The air of the sick room should also be free from odors as well. Nothing is better to secure such freedom than adequate ventilation, but at the same time we may often make use of deodorizers with advantage when the air is temporarily made unpleasant by fecal or gaseous smells incident to the use of the bed-pan or toilet cabinet. There are on the market inexpensive tapers which may be burned to cover odors, or solutions of volatile oils which may be used as sprays. In regard to urine, it is best to have the attendant on a sick person taught to regard every specimen as a possible source of contagion to others, and to exercise the greatest care to prevent the scattering of drops of urine over the patient,

the bedclothes, the floor, or over the clothes or hands of the attendant. Bedpans or urinals, unless otherwise ordered by the attending physician, should in ordinary cases be immediately emptied after use and thoroughly scalded with hot water. In contagious or infectious cases the urine should be disinfected with solution of carbolic acid, one part carbolic to twenty parts of water in quantity equal to that of the urine, or with bichloride of mercury solution, one part to one thousand of water, in an amount one-fifteenth that of the fluid to be sterilized. These mixtures with the urine should be allowed to stand at least two hours.

For the stools the most efficient means of sterilization is heat by steam in hoppers specially made for the purpose, a method which, of course, is available only in hospitals. In the private house, carbolic acid solution in the above strength, or freshly prepared milk of

lime solution, one part unslaked lime and three or four parts of water, is the most useful. The stool should be mixed with three times its volume of these solutions and be allowed to stand for several hours.

Any sputum would best be received on squares of cloth which may be burned, unless otherwise ordered by the physician.

House flies and mosquitoes are at least a nuisance, and may be a menace, so that they should be kept out by the use of wire screens in the windows and doors. Should either of them get into the room, they should be ruthlessly pursued and killed.

Live birds of any kind have no place in the sick room, except perhaps for a short time each day during convalescence. It is not alone because of their noise that they should be banished; they also may produce sickness, as I have once or twice seen myself and read of several times. A number of cases of Psittacosis, or dis-

ease from parrots, have been reported by Vickery and others.

The next requisite, quiet, is best obtained, as we all know, by getting as far above the street floor as is consistent with convenience. The upper stories are further removed from the noises of the street and those of the rest of the house. They are also less exposed to use as a gathering place for the other members of the family and visiting friends. Indeed, nothing is worse for any patient than to have his room the centre of gossipping neighbors, friends, and acquaintances, who use up the good air so necessary to the patient's welfare, and whose careless talk often excites his fears, or tires him unnecessarily in trying to keep pace with their ceaseless chatter. Visitors should be restricted both in number and in the time they stay. They should be cautioned to talk only of cheerful things and to watch for signs of fatigue

on the part of the patient, and should take their departure on the first evidence that they are no longer helping the patient by their presence. It seems hardly necessary for me to say that visitors should not be allowed to interfere with the patient's meals, or periods of rest or sleep. No visitor should be received in the evening, and only one should be admitted at a time. Such a person should lay aside the outside clothing, enter the sick room promptly and quietly, sit near the patient and face him opposite the light, so that the patient shall look away from the light. The visitor should speak quietly, distinctly, firmly, and in short sentences. The topics should be few and never argumentative. The doors of the sick room should not be allowed to creak on their hinges, the windows should not rattle, the blinds or curtains should not flap. A fire should be tended without unnecessary rattle of shovel and tongs, coal should be put on one piece at a time, each

wrapped in a paper or laid on with a gloved hand; all ashes should be removed with a wooden shovel. Keep rocking-chairs out of the sick room. Nothing is more disturbing to many patients than the ceaseless rock, rock, creak, snap of a rocker. Dresses which rustle, shoes which squeak, keys which jingle, and all similar things which make a noise, are to be banished. The shoes or slippers of the attendant had better be rubber soled or, best of all, moccasins. Rustling of papers, turning of leaves, unwrapping bottles are to be avoided before the patient. When a door is opened let it be done softly and promptly. Heavy, clumsy movements, and stumbling over objects are to be avoided. Above all things, do not lean up against, sit upon, shake, or touch unnecessarily the patient's bed, or bump against it in passing. Do not allow anybody to tiptoe about the room or speak in whispers, unless the patient be sound asleep and you do not wish to waken him.

While the patient is awake, all moving about is to be deliberately done without show of haste. After the patient is settled for the night, nothing should be done in the room — absolute quiet should reign.

The bed should be a single brass or iron bedstead with woven wire spring mattress, or chain springs. Its height should be convenient for the attendant and a little higher than the ordinary bed in order to relieve the constant stooping over in caring for the patient. Its height should be about twenty-five inches. It should be six feet, six inches long and thirty-seven inches wide. The bed should be accessible from all sides. The mattress is best made in three cross sections, so that the middle one may be easily removed for use of a bed-pan where the least movement of the patient is desirable. Sheets should be of white bleached cotton, two and three-quarter yards

in length and of sufficient width to be tucked under the edges. Linen sheets are cooler and are therefore more comfortable in summer. Blankets should be light in weight, and of white or yellow color, so that dirt may be easily detected.

The position of the bed in the room is of importance. If it is to be occupied much of the time, it should never fill a corner and square with the wall, for it then gets into a dead air space. The head should be toward one wall and a few inches out from it, so that there may be free circulation of air currents behind. It is best not to face a window. There is no objection to an air current across the foot of the bed, provided an extra foot-covering, as an afghan, be used. Should it be inconvenient to avoid facing the light, a narrow screen affixed to the foot of the bed should be devised to take off the glare. Some appliance to retain the bed in place may be used, but it should allow of some easy variation of position.

It is, so far as we know, a matter of indifference whether the head of the bed is toward the north, south, east or west in reference to health.

In making a bed, the under sheet is put on first, and must be drawn quite tightly over the mattress and be well tucked in, first at bottom and top and then at the sides, or it may be fastened to the mattress by safety-pins. Whenever the bed is liable to become soiled, two draw-sheets are needed to protect the mattress. The under draw-sheet is usually of rubber or mackintosh, but ordinary table oil-cloth, enamelled cloth or oiled muslin may be used. When these cannot be obtained, the best substitute is paper, either two thicknesses of heavy brown wrapping paper, or newspapers. An old blanket or comforter should not be used unless nothing else can be obtained. The best draw-sheet is a piece of rubber cloth thirty-two inches long and forty-five

inches wide. It is placed across the bed over the lower sheet so as to reach from the middle of the back to the knees. It may be provided with eyelets to lace across under the bed, or with tapes to tie to the sides of the bed, or it may be pinned to the mattress at the four corners, to avoid wrinkles. A cotton draw-sheet two and one-quarter yards long and two yards wide is doubled and placed over the rubber sheet so as to cover it completely; it is tucked in at the sides and fastened at the four corners with safety-pins to the under part of the mattress. Then comes the upper sheet, and above it the blankets, and lastly the spread, which should be light in weight, as white dimity, or a honeycomb spread. A heavy counterpane or down-quilt interferes with the proper ventilation of the bed and should never be used. These coverings of the bed should be tucked in at the sides and bottom, but not drawn too tightly over the patient's feet. The

upper end of the sheet is to be folded back over the blanket and coverlet.

The patient must often be propped up in bed; for this a bed-rest is needed. The best consists of an adjustable wooden or metal frame with back of canvas, cane, carpet, webbing, or fitted with a spring as in a hack, and with arms. In the absence of this, the patient may be strung up in netting or canvas which is passed around his back with the ends tied to the foot of the bed. A straight-backed chair may be turned upside down so that it rests on the front edge of its seat and the top of its back, or a short ironing-board or table-leaf may be rested in a slanting direction on the bed and on the headboard, with the mattress over it. When pillows are used to prop up the patient, if they are put with their ends overlapping and V-shaped, they will serve better than if they are laid over each other in the usual way.

To keep the patient from slipping down in bed, a roller pillow twenty-one inches long and from four to eight inches thick, made of stout ticking and stuffed firmly with horsehair, and covered with a cotton slip, may be used under the knees. Or a bolster, blanket, or comforter may be rolled up and put in a bolster case, and the ends tied with strong tape or bandage strips to the head of the bed. If the patient is tolerably strong, a block of wood nearly the width of the bed and bevelled on the side toward the feet, or a footstool with the upper side toward the feet may be used, or even a small drawer against which he may push with the feet.

To aid the patient in moving around in bed, various devices are in use. The best is the bed-crane, an arched iron curve fixed to the head of the bed by its long upright part and having suspended from its end an adjustable leather strap with a handle. A strap or cord suspended from a ring in the ceiling, or fastening the

crane to the wall above the bed is not so practical, because it prevents the bed from being moved. A stout tripod may be placed over the bed, and the strap suspended from that. Or from a tripod over the bed a trapeze may be suspended with loops from the ends, which allow the patient to slip his arms through, and thus partially suspend himself when he finds difficulty in breathing, as in certain forms of heart disease; while a transverse band may be used to prop up the head, and allow him to sleep sitting up.

A bed-trace may be used, consisting of a saddle girth, strap, rope or towel tied in a loop reaching about to the middle of the body, and fastened to the foot of the bed.

To keep the bed-clothes away from the body or any part of it, bed-cradles are employed. Such may be improvised by means of three or four half-barrel hoops tied to three canes or broomsticks; or the hind legs of two chairs may be tied to the

sides of the bed, the backs uppermost. Or for a limb, a wooden or pasteboard box may have the ends cut out and be inverted, or a three or four-legged stool may be used.

To prevent bed-sores, the parts of the body exposed to prolonged pressure must be protected. Water cushions are the most serviceable for this purpose. Next come rubber air-cushions of various shapes. Japanese paper rings to be inflated with air are obtainable, and are quite inexpensive. Ring pillows made of various materials, or doughnut-shaped bags filled with cotton, wool, oakum, jute, straw, or composition, are often useful.

For local dry heat, hot water coils, bags, bottles, cans are used, but must have a flannel cover, such as an undershirt or large stocking. Heated bricks, tiles, plates, irons or marble slabs may be used, also covered. Or electric heating

pads, chemical thermophores, or Japanese hand stoves may be employed.

Dry cold may be obtained from an ice-water coil, or an ice-bag, the latter filled with small pieces of cracked ice. Mixing the ice with sawdust about one third, or with meal, will make it last longer; while putting in a little salt will intensify the cold. In emergencies, glass bottles, tin boxes, a pig's bladder, or a waterproof sponge-bag may be used as containers.

To keep liquids hot or cold, there is nothing better than the thermos bottle. For temporary use we may employ as a substitute a small pitcher over which we invert a crockery slop-jar or basin. Ice may be kept a longer time when suspended in a piece of gauze, mosquito-netting or coarse flannel, and allowed to drip into a tumbler or pitcher underneath, without touching the surface of the liquid.

Portable bed-tables, or bed-trays, standing on legs high enough to keep the tray off the body, are very useful. Such can be readily improvised.

A bedside table mounted on rollers is useful.

A screen is often useful to keep off drafts, the glare of the sun or heat of a fire, though such can be improvised with a chair or clothes-horse covered with a blanket, sheet, or shawl.

Among useful articles needing no description are bed-pans (always to be warmed before use).

Sputum cups.

Sputum napkins (Japanese napkins, squares of gauze or cotton cloth).

Commodes.

Urinals (improvised from bottles, jam jars, etc).

Feeding cups of crockery ware, with a nozzle from which to drink.

Bent tubes of glass through which to drink liquids.

Graduated medicine glasses.

A nursery refrigerator, while convenient, may be replaced by one of the contrivances mentioned above.

Fresh flowers, not too many or of too strong a perfume, may be allowed in the room by day, if agreeable to the patient; at night they had better be removed.

The room is to be swept daily without raising dust, as by using moist tea leaves or sawdust. Carpet to be cleaned by means of a cloth wrung out of hot water and rinsed out when dirty.

In dusting, a moist cloth is to be used — never a duster or dry cloth.

Disinfecting is best done by the orders of the physician.

The care of the mouth, or oral hygiene, is one of the chief of the duties of the

nurse or attendant, for it is particularly in the sick that there is danger of the development of dental caries from the lack of attention on the part of the patient himself or of the attendant. The exciting cause of dental caries or decay is the lodgment of particles of food and bacteria between and on the teeth, and the subsequent fermentation of this food with the production of acids and toxins which destroy tooth tissue. The starches and the sugars are the foods which are chiefly responsible for this fermentation, which begins very quickly, so that the mouth should be properly cared for after each partaking of food.

An unclean mouth is a most prolific, if not *the* most prolific, source of danger to the health of the individual of which we have any knowledge.[1] Sir William Osler, in an address before the students of the

[1] Marshall: "Mouth Hygiene and Mouth Sepsis." 1912.

Royal Dental Hospital of London, said they must preach the gospel of cleanliness of the mouth, cleanliness of the teeth, cleanliness of the throat. These three things should be their text through life. "Oral hygiene, the hygiene of the mouth — there is not one single thing more important to the public in the whole range of hygiene than that." He further says, "If I were called upon to state which of the two, in my opinion, causes the most evil, alcohol or decayed teeth, I should unhesitatingly say decayed teeth." This shows how carefully we must attend to the mouth in cases of illness.

How to clean the teeth: A good brush, a spool of floss silk, a tongue scraper, and plenty of pure water are all that are needed ordinarily for cleaning the mouth and the teeth. Tooth-powders or pastes may sometimes be necessary to keep the teeth bright and clean; but when the in-

dividual habitually brushes the teeth three or four times daily, powders and pastes are unnecessary. The tooth-brush is to be used horizontally and up and down with a rotary motion from the gums to the free ends of the teeth length-wise, both back and front.

Mouth washes are of little value. Most of these articles are comparatively weak solutions of one or more of the volatile oils and alcohol. Kobert says they have few antiseptic properties, and any good they exert is doubtless due to their detergent qualities alone, so that they are little if any preferable to so much good clean water. The care of the mouth of the invalid is of great importance, — cleanliness is the first consideration. When quite ill, patients are treated by wiping the teeth with a piece of sterile gauze wrapped upon the first finger of the right hand or upon an orange-wood stick — the finger being preferable for

obvious reasons — moistened with a two per cent solution of carbolic acid or a saturated solution of boric acid. Then with the orange-wood stick, flattened at one end and wrapped with a little sterilized cotton, carefully rub the surfaces of all the teeth with a twenty-five per cent solution of hydrogen peroxide, cleaning one tooth at a time. The foam from the effervescence caused by the contact of the hydrogen peroxide with the fluids of the mouth may be wiped away with pieces of gauze moistened in orange water. Such a cleansing is usually grateful and refreshing to an invalid and is looked forward to with pleasure. The tongue should be cleaned in all cases of severe illness every morning by means of the tongue scraper, which is made of ivory, bone, or celluloid. It should be about six inches long, thin in the middle and thicker at the ends, so that on bringing the ends together it will form a bow. This instrument is to be carried back to

the root of the tongue and drawn forward upon the surface several times. The tooth-brush may be used for the same purpose but is inferior to the scraper and less comfortable to the patient. The tongue should be carefully wiped, after use of the tongue scraper in the invalid, with a piece of sterilized gauze moistened with a saturated solution of boric acid. The cleansing of the tongue, aside from its prophylactic values, is a matter of great comfort to a patient with fever, and should never be neglected unless it is too disturbing to the patient. Just as soon as the patient is strong enough to sit up in bed, the tooth-brush must be used and the mouth rinsed with saturated solution of boric acid flavored with orange water.

Proper and thorough insalivation of the food can only be attained by sufficient mastication, which should be prolonged till all the food forms a soft, thin bree in

the mouth. It may then be swallowed. One of the most important duties of the attendant on a patient is to superintend the proper mastication of food in those who are able to chew.

Next to the care of the mouth is the need of offering drinking water to the patient without waiting for evidences of thirst. There is a quantity of water lost by insensible perspiration, which is calculated to be at least one pint in twenty-four hours. At least another pint is exhaled with the breath, while the urine makes up more than this in the course of the whole day. Thus we see that we must make good each day at least three or four pints of fluid lost in the ordinary vital processes, and this can be accomplished by giving two tumblers of water with each meal and two additional tumblers at other times, eight tumblers in all. The fluid in the different articles of food given will then suffice to furnish the

quantity of liquid required in the digestive processes. Should there be fever the above quantity of water should be very largely increased, not necessarily perhaps at the meal hours, but at other times as well.

The water which the patient drinks will help to wash out the toxins developed in the body, and will also help in the various vital processes necessary to the progress of the patient.

" Do we need a nurse ? " is a question we constantly hear. The answer to this question varies with the case. If it be a severe illness, such as pneumonia, typhoid fever or rheumatic fever, or if it be a contagious disease, such as measles, scarlet fever, German measles, we must have one or even two, unless the patient is to be removed to a hospital. Careful and judicious nursing is so important in all but the last of the above diseases that its absence may mean all the difference

between a complete and perfect restoration to health and a subsequent life of prolonged invalidism. In any case, the patient's comfort is enhanced and his return to health facilitated by the presence of a nurse. Moreover, the care of the patient is reduced to an orderly system, the meals and medicines are administered regularly, and the attention of the patient is directed to one thing alone, namely, his recovery. It is no small advantage to have the feeling of security which the presence of a good nurse gives the patient, doctor, and family. What is lost in the increased pecuniary outlay is more than counterbalanced by the peace of mind and confidence engendered by the nurse's presence and the knowledge that we have done our best to promote the patient's welfare. With a nurse the patient is more closely watched, every symptom is recorded, and nothing which may be of consequence to the physician in treating the

case is lost. It is a great advantage to the physician to have the assistance of a capable nurse. It is not always that a fully trained nurse is required. Frequently a nurse-attendant will suffice, and if the case is neither severe nor critical, such an one will answer very well. But in serious or alarming cases, the most highly trained person will be none too good.

The care of the hair in a female patient demands skilled assistance. I well recall the state of a patient's head in the early days of my practice, where no attention was given to the head for four days of a severe fever. The days and days of hard work which had to be expended on that head will never be effaced from my memory. Giving a bath demands more knowledge than most lay persons possess, and it adds much to the comfort and progress of the patient. Most nurse-attendants, as well as trained nurses, are taught at the present time how to shave patients

and cut their hair — perhaps not so well as a professional barber, but still very creditably. The nurse knows how to give the different baths, such as a hot sponge bath, alcohol rub, and the various wet packs, all of which are important in helping the patient. Massage must be given by a skilled hand, and this is one of the present day accomplishments of the nurse.

To measure the twenty-four hour quantity of urine and to save proper specimens for the physician's examination are among her duties. The careful watching of the movements of the bowels, and proper recording of them while they are fresh, will often materially aid in the treatment. I once saw a nurse give timely notice of a threatened hemorrhage from the bowels, which enabled proper proceedings to be instituted, which saved the patient's life; and I recall another similar case where ten hours were lost

from inefficient observation, and the patient died. During convalescence of the patient, the nurse may often, by her tact and skill, note the various things observed in her daily walk and returning with a fresh color and show of health prove very inspiring by telling of the different things she has seen. Reading aloud to the convalescent is another of her accomplishments. Her trained eye perceives the approach of fatigue and forestalls it. She frequently becomes a life-long friend of the entire family, and one to whom they instinctively turn in all emergencies.

I have often had patients after a severe illness say they constantly saw, during the severity of the attack, some crouching thing in one corner which subsequent analysis proved to be a combination of a shadow cast by some piece of furniture and a figure on the wall paper. Hence it is well to have nothing in the room to

cast shadows. Furthermore, pictures with human faces looking toward the patient often seem to scowl, wink, or threaten him. They must be removed or turned face to the wall. Clocks with a swinging pendulum are often annoying, even when the ticking noise is passed unnoticed; hence all rhythmic movements must be stopped during the height of an illness.

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